

State of the Fireflies of the United States and Canada:



Salt Marsh Firefly

THREATENED & NEAR THREATENED SPECIES PROFILE

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This species profile was compiled based on information gathered from the IUCN Red List assessments and augmented with new information that has become available since its publication. Full Red List assessments (including range maps) are available at www.iucnredlist.org/.

KEY TO SPECIES PROFILE

Conservation Status

IUCN—Red List ranking

NS—NatureServe Global (G), National (N), and Subnational (S) Conservation Status Rank:

GX NX SX	Not located despite intensive searches and virtually no likelihood of rediscovery
GH NH SH	Known from only historical occurrences but still some hope of rediscovery
G1 N1 S1	At very high risk of extinction or collapse
G2 N2 S2	At high risk of extinction or collapse
G3 N3 S3	At moderate risk of extinction or collapse
G4 N4 S4	At fairly low risk of extinction or collapse
G5 N5 S5	At very low risk or extinction or collapse
GNA NNA SNA	A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities
GNR NNR SNR	Global rank not yet assessed
GU NU SU	Currently unrankable due to lack of information or due to substantially conflicting information about status or trends
G#G# N#N# S#S#	Numeric range rank (e.g., G2G3, G1G3) is used to indicate uncertainty about the exact status of a taxon or ecosystem type

SGCN—Species of Greatest Conservation Need, legal designation by state

US ESA—Species' legal status under the US Endangered Species Act

Male Size Ranges

The documented size range for males of each species has been provided in the profiles as follows:

9–10 mm



With the smallest size in grey () superimposed over the largest size in green (). When printed at 100% scale, the bars match the lengths provided.

Habitat Threats

Pollution	Agriculture	Habitat Loss, Degradation, Fragmentation	Climate & Severe Weather
Excess light Energy & mining Pesticides & run-off	Crop systems Livestock & pasture	Habitat loss Trampling / crushing Invasive species Water quality	Climate change Drought Sea level rise Severe storms & flooding Rising temperatures

Photuris salina
Salt Marsh Firefly



NEAR THREATENED
NT



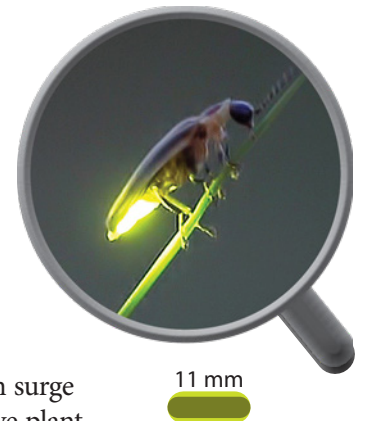
Woodland Beach Wildlife Management Area in Kent County, Delaware, one of the few known locations where the species is still found [above]; adult *P. salina* perched on a blade of grass [below]. (Photos: Lee Cannon / flickr [above]; Radim Schreiber [below and on cover].)

Conservation Status

- » IUCN: NT
- » NS: G3; S3 (DE), SNA (VA), SNR (MD, NJ)
- » SGCN: Delaware
- » US ESA: Not listed

Distribution

USA—Delaware, Maryland, New Jersey, Virginia



Description

The salt marsh firefly is restricted to tidal marsh habitats along the mid-Atlantic coast from New Jersey to Virginia.

The primary threat to this species is habitat loss and degradation due to sea-level rise and storm surge associated with climate change, pesticide use, urban development, and the spread of the invasive plant, common reed (*Phragmites australis*), which can overtake this species' marshy habitat and make it uninhabitable for fireflies. Some of the localities in Delaware may be extirpated due to these threats.

Flash Pattern & Activity Period

Adults are active May–July after dark. Males emit a single yellowish flash about once per second, sometimes in near synchrony with conspecific males, while flying just above the vegetation that lines the salt marshes in which they fly.

	0	1	2	3	4	5	6	Seconds
♂	Flash	Flash	Flash	Flash	Flash	Flash	Flash	→ Short single flash repeated once per second
♀								→ Female response unknown*

* Due to the aggressive mimicry utilized by some “femme fatale” firefly species—some of which have been documented using multiple flash-pattern responses—it has been difficult to determine which flash-patterns are used to attract mates or, alternately, to lure in unsuspecting prey males from other firefly species.